

Spiders of the Genus *Heptathela* (Araneae, Liphistiidae) from Kyushu, Japan

By

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小野展嗣*: 九州地方のキムラゲモ属 (クモ目, ハラフシグモ科) のクモ類

Introduction

The spider of the mesothelid family Liphistiidae was first collected in Japan at Kagoshima, southern Kyushu, in October 1920 by a high school student, Arika KIMURA, who later became a professor of botany at Tôhoku University (ONO, 1987) and passed away in the last year (1996) at the age of 96. The spider was described without delay by Kyukichi KISHIDA (1920) under the name of *Liphistius kimurai*. Having carefully examined the specimens of the spider, KISHIDA (1923) established a new genus, *Heptathela*, for the species.

Since then, the spider was recorded from various areas in Kyushu (Fig. 33; see KIKUYA, 1996) and on the Ryukyu Islands (see the references in ONO, 1997 b) and became well known. Although biologically studied by many arachnologists [SAWAGUTI & OZI, 1937; YOSHIKURA, 1954, 1955; KIKUYA, 1993, 1996; and many others; for literature see YOSHIKURA (1987) and KIKUYA (1996)], the spider was poorly studied systematically.

On the basis of both the morphological and biological observations, HAUPT (1979, 1983, 1990) revised the liphistiid spiders of Japan and classified *Heptathela kimurai* into six subspecies of two species of two different genera, that is, *Heptathela kimurai kimurai* (KISHIDA, 1920) (most areas of Kyushu), *H. kimurai higoensis* HAUPT, 1983 (Kumamoto Pref., Kyushu), *H. kimurai amamiensis* HAUPT, 1983 (Amami-ôshima Island), *H. kimurai yanbaruensis* HAUPT, 1983 (northern part of Okinawa-hontô Island), *Ryuthela nishihirai nishihirai* (HAUPT, 1979) (southern part of Okinawa-hontô Island), and *R. nishihirai ishigakiensis* HAUPT, 1983 (Ishigakijima Island).

I have been also interested in liphistiid spiders and collected specimens not only from Kyushu and the Ryukyu Islands, Japan, but also from Thailand, Malaysia and Vietnam. Some papers were published on the basis of these materials (ONO, 1988 a, b, 1996, 1997 a, b; ONO & NISHIKAWA, 1989; ONO & SCHWENDINGER, 1990). Evaluation of the taxonomic rank adopted in these papers was different from that of HAUPT. A group recognized as being subspecifically distinct from other groups was regarded as a species. For instance, *Heptathela amamiensis* was raised from a subspecies of *Heptathela kimurai* to a full species (cf. discussion in ONO & NISHIKAWA, 1989).

In the present paper, the result of my taxonomical study will be reported on the spiders of the genus *Heptathela* from Kyushu. The specimens used in this study were preserved in the collection

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of the Department of Zoology, National Science Museum, Tokyo, including those from the northern part of Kyushu obtained during the researches made by the museum in 1996 [see the preface of this number of the memoirs (No.30, p.1)]. These specimens were classified into seven species, all of which were hitherto identified with *Heptathela kimurai*, and four of which are new to science. The known records and descriptions without exact localities of the specimens are omitted.

The type specimens of the new species to be described in this paper are deposited in the collection of the Department of Zoology, National Science Museum, Tokyo (NSMT). The abbreviations used herein are as follows: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye.

Family Liphistiidae

Genus *Heptathela* KISHIDA, 1923

Heptathela kimurai (KISHIDA, 1920)

(Figs. 1-4)

Liphistius (?) *kimurai* KISHIDA, 1920, p. 362 (holotype: ♀ designated by KISHIDA from Shiroyama, Kagoshima, Kyushu, Japan, X-1920, A. KIMURA leg., lost in the Science College Museum of Tokyo Imperial University (HAUPT, 1983); neotype: ♂ from the same locality as for the original type specimen, 21-III-1982, adult in VIII-1982, J. HAUPT leg., neoparatype: 1 ♀, same locality and collector as for the neotype, 25-III-1982; both the type specimens designated by HAUPT (1983) in the Zoological Museum, Hamburg, Germany, not examined.

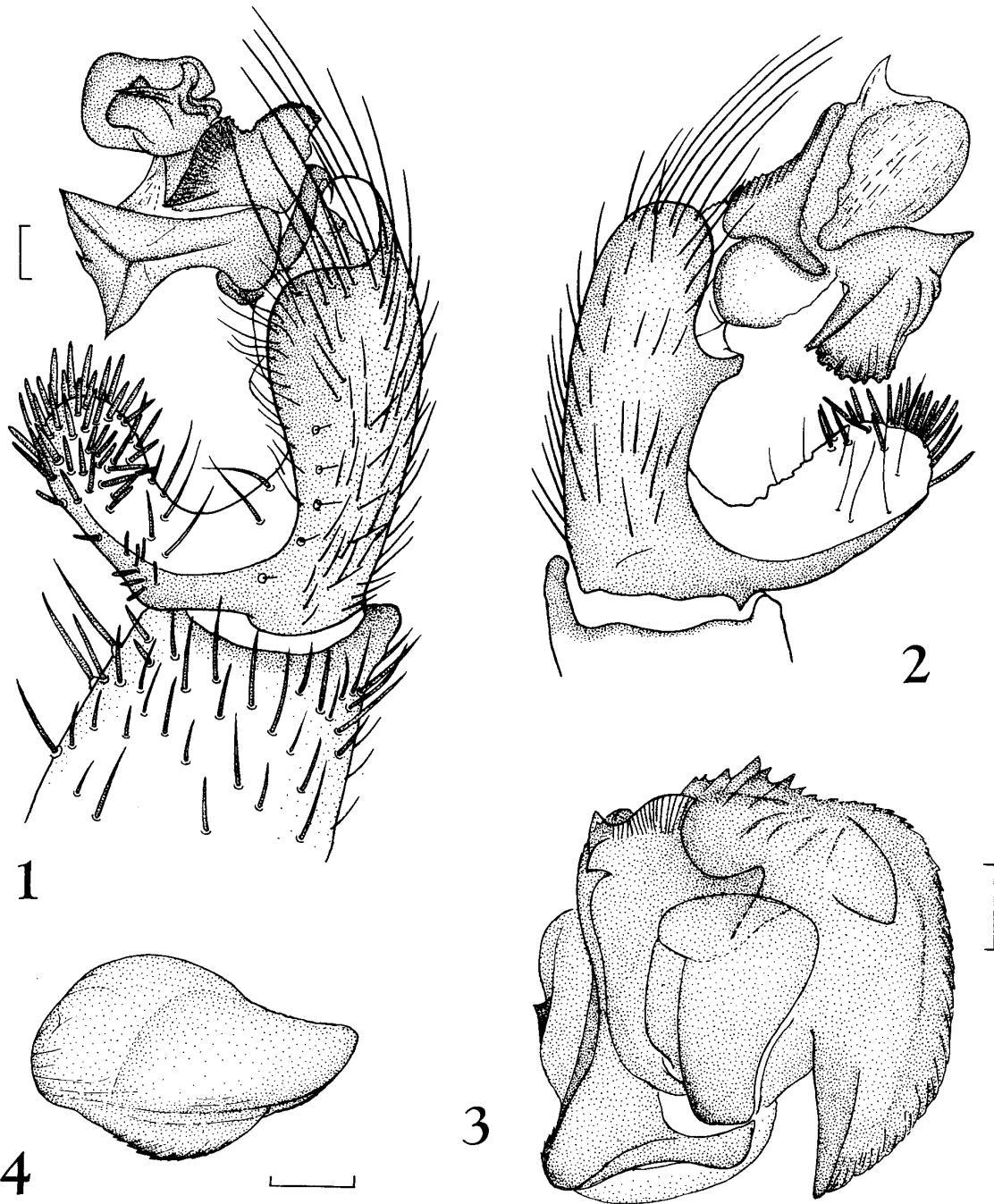
Heptathela kimurai: KISHIDA, 1923, p. 236, figs. 1-7.

Heptathela kimurai kimurai: HAUPT, 1983, p. 283, figs. 7 a-b, 9 a, 12 c, 13 c.

Specimens examined. 1 ♂, Kagoshima-shi, Kyushu, Japan, by pit-fall trapping in a forest of *Chamaecyparis obtusa*, 11-VII-1970, K. TANAKA leg. (NSMT-Ar 3549).

Diagnosis. The male palp of the only specimen examined were illustrated (Figs. 1-4). General appearance of the palp agrees well with the figure given by HAUPT based on the neotype (cf. Figs. 1-2 and HAUPT, 1983, fig. 7 a-b). The bulb is relatively slender and twisted. The embolus is of wide lamella; the margin of tegulum is serrate; the contrategulum is poorly serrate and its margin is not lamellar; the conductor is roundish but not rugate, widest at the middle, and its prolateral margin is weakly serrate. The conductor of this species is similar in shape to those of *Heptathela kikuyai* and *H. yakushimaensis* spp. nov., while the contrategulum resembles that of *H. higoensis*. According to the figure made by HAUPT, the female genitalia of this species have small spermathecae resembling those of *Heptathela yakushimaensis* sp. nov.

Distribution. Kyushu (Kagoshima-shi). Reliable records of this species were only from Kagoshima-shi in the southernmost part of Kyushu.



Figs. 1-4. *Heptathela kimurai* (KISHIDA, 1920), ♂ from Kagoshima-shi. — 1, Male palp, retrolateral view; 2, same, prolateral view; 3, bulb, distal view; 4, contrategulum, prolateral view. [Scales: 0.2 mm.]

Heptathela higoensis HAUPT, 1983, stat. nov.

(Figs. 5-10)

Heptathela kimurai higoensis HAUPT, 1983, p. 283, figs. 12 a, 13 a (holotype: ♂ from Kumamoto-shi, Kyushu, Japan, 27-IX-1973, M. YOSHIKURA leg., preserved in the Museum of Comparative Zoology, Harvard University, Cambridge, U.S.A., not examined).

Specimens examined. 2♀1♂, Oyama-chô, Kumamoto-shi, Kyushu, Japan, 8-14-IX-1996, H. ONO leg.; 1♀, Tatsutayama, Kumamoto-shi, 10-III-1987, H. ONO leg.; 1♀, Hanaokayama, Kumamoto-shi, 10-III-1987, H. ONO leg. (NSMT-Ar 3540-3542, 3555-3556).

Diagnosis. Though HAUPT (1983) subspecifically separated this spider from *Heptathela kimurai*, the male palp and female genitalia of this species are considerably different from those of the latter species. The conductor of the male palp is very wide and with an apical tooth, and a deep fold and appears peculiar in the spiders in Kyushu. The female genitalia of this species resemble those of *Heptathela yaginumai* sp. nov. in having an inner bursa formed by a large granulate tubercle (cf. Figs. 9-10 and 19-20).

Distribution. Kyushu (Kumamoto-shi).

Heptathela kikuyai sp. nov.

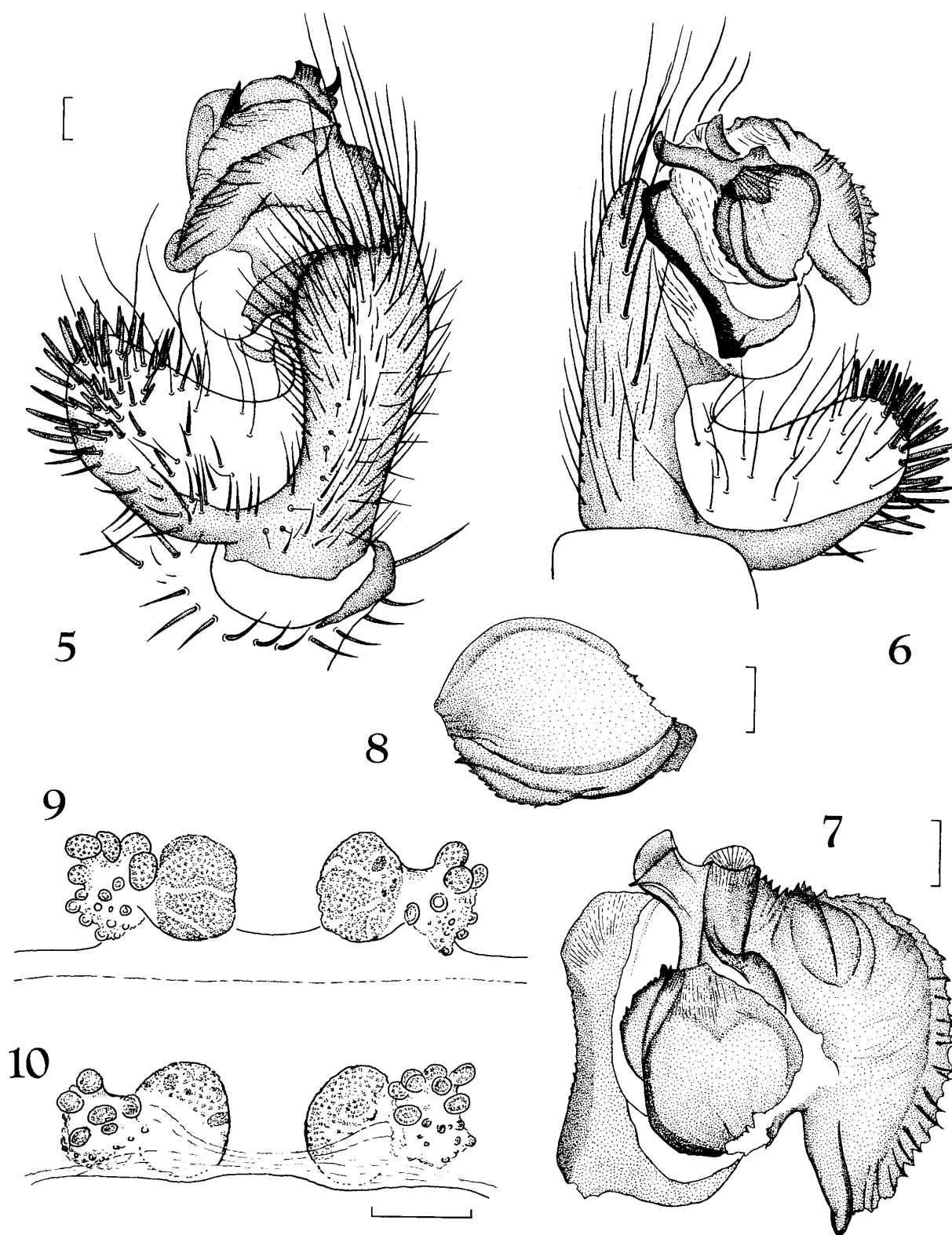
(Figs. 11-16)

Diagnosis. This new species is closely related to *Heptathela kimurai* and *H. yakushimaensis* sp. nov., but is distinguished from the two species by the shape of the conductor in male palp and the structure of female genitalia. The conductor of the male palp is ovate, and basally wider than that of *H. kimurai* (cf. Fig. 4 and 14 and HAUPT, 1983, p. 287, fig. 13 c), and the embolus is narrower than that of the latter. The spermathecae of the female genitalia are much developed in *H. kikuyai* (cf. Fig. 5-6, 15-16 and 31-32, HAUPT, 1983, p. 285, fig. 9 a).

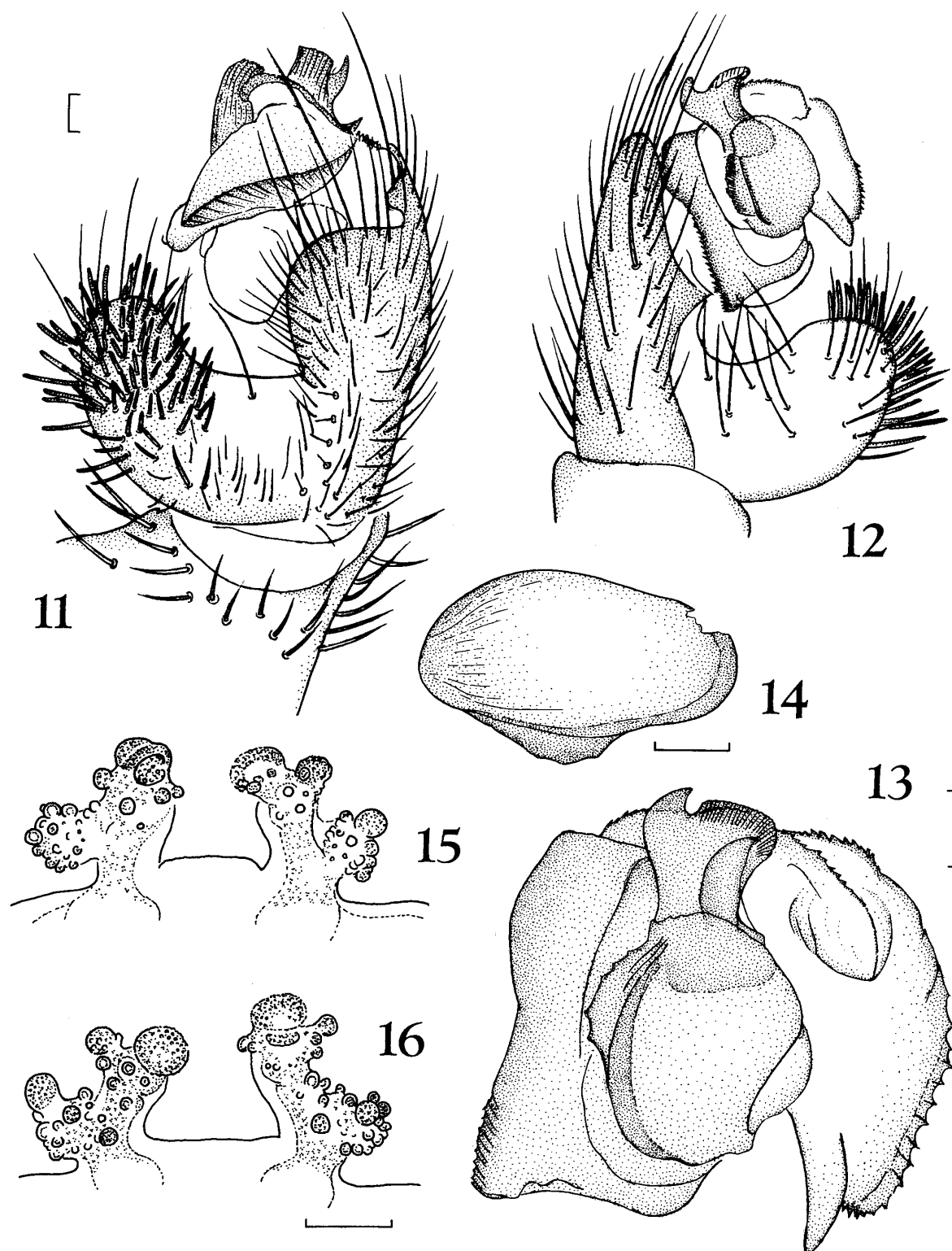
Type series. Holotype: ♂, Mt. Gozagatake, 20 km south of Ôita-shi, Ôita Pref., Kyushu, Japan, 13-IX-1979, N. KIKUYA leg. (NSMT-Ar 3516); paratypes: 1♀, Ôita-shi, III-1987, H. ONO leg. (NSMT-Ar 3520), 1 juv. ♀, Miyanakubo, Sasamuta, Ôita-shi, 11-III-1987, H. ONO leg. (NSMT-Ar 3521), 6♀1 juv. ♂ 4 juv., Takachiho-chô, Nishiusuki-gun, Miyazaki Pref., 8-14-IX-1996, H. ONO leg. (NSMT-Ar 3544-3548), 1♀, Shimohôri, Kitagawa-mura, Higashiusuki-gun, Miyazaki Pref., 18-VII-1974, S. MATSUMOTO & E. SHINKAI leg. (NSMT-Ar 3543).

Description. Measurement based on the holotype and a paratype. Body length ♀ 10.6 mm, ♂ 11.3 mm; prosoma length ♀ 5.0 mm, ♂ 5.3 mm, width ♀ 4.2 mm, ♂ 4.5 mm; opisthosoma length ♀ 5.3 mm, ♂ 6.3 mm, width ♀ 3.9 mm, ♂ 4.4 mm; lengths of palps and legs [total length (femur + patella + tibia + metatarsus + tarsus)]: ♀, palp 9.0 mm (3.0 + 1.6 + 1.9 + — + 2.5), leg I 9.9 mm (3.3 + 1.7 + 1.8 + 1.9 + 1.2), II 9.9 mm (3.1 + 1.7 + 1.8 + 2.1 + 1.2), III 10.7 mm (3.3 + 1.9 + 1.7 + 2.4 + 1.4), IV 15.5 mm (4.6 + 2.2 + 2.7 + 4.0 + 2.0), ♂ palp 10.2 mm (3.1 + 1.8 + 3.1 + — + 2.2), leg I 14.2 mm (4.6 + 1.6 + 3.0 + 3.4 + 1.6), II 15.1 mm (4.2 + 2.0 + 3.0 + 4.0 + 1.9), III 16.7 mm (4.3 + 2.0 + 3.1 + 4.8 + 2.5), IV 21.8 mm (5.6 + 2.5 + 4.1 + 6.5 + 3.1).

Prosoma longer than wide, head high; ocular tubercle wider than long, ALE > PLE > PME > AME (♀ nearly 20 : 14 : 9 : 2, ♂ 21 : 16 : 11 : 2), AME very small, clypeus wider than ALE-ALE,



Figs. 5-10. *Heptathela higoensis* HAUPT, 1983, ♀ ♂ from Kumamoto-shi. — 5, Male palp, retrolateral view; 6, same, prolateral view; 7, bulb, distal view; 8, contrategulum, prolateral view; 9, female genitalia, dorsal view; 10, same, ventral view. [Scales: 0.2 mm.]



Figs. 11-16. *Heptathela kikuyai* sp. nov., ♂ holotype and 1 ♀ paratype from Ôita-shi. — 11, Male palp, retro-lateral view; 12, same, pro-lateral view; 13, bulb, distal view; 14, contrategulum, pro-lateral view; 15, female genitalia, dorsal view; 16, same, ventral view. [Scales: 0.2 mm.]

median ocular area trapezoidal, wider than long. Chelicera with 14 teeth and 3 denticles on promargin of fang furrow in female, with 11 vestigial teeth in male. Leg formula IV, III, II, I; legs of males much longer than those of females; superior claws of tarsi each with 2-3 teeth in female, with 3-4 teeth in male, claw of female palp with one tooth.

Male palp (Figs. 11-14). Tibia without apophysis. Bulb (Figs. 11-12) seemingly larger than those of *Heptathela kimurai*; embolus of wide lamella, with two peaks, distal sclerites in three parts: tegulum with serrate margin, contrategulum simple and poorly serrate (Fig. 13), conductor roundish and not rugate, much longer than wide, width of its basal part as same as that of the distal part, prolateral margin weakly serrate (Fig. 14).

Opisthosoma ovate, longer than wide; posterior median spinnerets reduced and fused, with one median and a pair of lateral setae.

Female genitalia (Figs. 15-16). Spermatheca large and relatively long, indistinctly divided into two parts: inner organ with a pellet on the top and some granules, outer organ forming a cluster with many granules.

Coloration and markings. ♀ ♂ Prosoma yellowish brown, ocular tubercle black; chelicera dorsally yellowish brown, ventrally reddish brown, sternum, legs and palps yellowish brown. Opisthosoma beige, dorsal sclerites beige mottled with greyish brown; ventral sclerites light yellowish brown, genital part darker, spinnerets yellow.

Distribution. Kyushu (southern part of Ōita Prefecture and northern part of Miyazaki Prefecture).

Remark. This species is dedicated to Dr. Narayoshi KIKUYA, Ōita.

***Heptathela nishikawai* sp. nov.**

(Figs. 17-18)

Diagnosis. The female genitalia of this new species is peculiar in having spermatheca with a inner, main bursa short and thick, and distally with several middle-sized tubercles (Figs. 17-18).

Type series. Holotype: ♀, Hitoyoshi-shi, Kumamoto Pref., Kyushu, Japan, 19-XI-1996, H. ONO leg. (NSMT-Ar 3526); paratypes: 3 ♀, same data as for the holotype (NSMT-Ar 3527-3529).

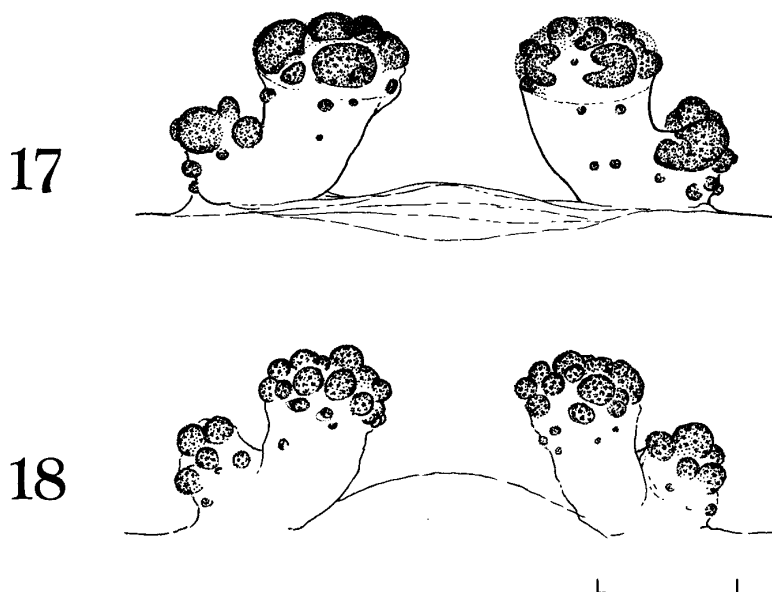
Description of females (male not available). Measurement based on the holotype. Body length 11.4 mm; prosoma length 4.6 mm, width 3.9 mm; opisthosoma length 5.9 mm, width 4.8 mm; lengths of palp and legs [total length (femur + patella + tibia + metatarsus + tarsus)]: palp 8.4 mm (2.7 + 1.8 + 1.7 + — + 2.2), leg I 9.4 mm (3.1 + 1.7 + 1.8 + 1.7 + 1.1), II 9.3 mm (2.9 + 1.7 + 1.8 + 1.8 + 1.1), III 9.9 mm (2.8 + 1.8 + 1.7 + 2.3 + 1.3), IV 13.8 mm (4.1 + 1.8 + 2.4 + 3.7 + 1.8). Variation of body length: ♀ 10.2-14.0 mm.

Prosoma longer than wide, head high; ocular tubercle wider than long, ALE > PLE > PME > AME (nearly 17 : 14 : 9 : 2), AME very small, clypeus wider than ALE-ALE, median ocular area trapezoidal, wider than long. Chelicera with 12 teeth and 2 denticles on promargin of fang furrow.

Leg formula IV, III, I, II; superior claws of tarsi each with 2 teeth; claw of palp with a tooth.

Opisthosoma ovate, longer than wide; posterior median spinnerets reduced, completely fused and with 9 setae.

Female genitalia (Figs. 17-18). A pair of spermathecae present; spermatheca divided into two parts: inner, main bursa short and thick, with several middle-sized, granulate tubercles at the top,



Figs. 17-18. *Heptathela nishikawai* sp. nov., ♀ holotype from Hitoyoshi-shi. — 17, female genitalia, dorsal view; 18, same, ventral view. [Scale: 0.2 mm.]

outer and secondary part not developed, with some tubercles.

Coloration and markings. Prosoma dark brown, cephalic part chestnut, ocular tubercle black; chelicera brown, basally lighter, fang reddish brown, sternum and coxae of legs and palps light yellowish brown, other segments of legs and palps brown. Opisthosoma beige, dorsal sclerites dark brown, ventral sclerites light beige, spinnerets light yellowish brown.

Distribution. Kyushu (known only from the type locality).

Remarks. This species is dedicated to Dr. Yoshiaki NISHIKAWA, Osaka, who kindly gave me information about the male of this new species. YAGINUMA (1979, 1980) published illustrations of the male palp of "*Heptathela kimurai*" collected at Hitoyoshi, Kumamoto Prefecture. Though his specimen was not available for this study, the male in question may belong to this species.

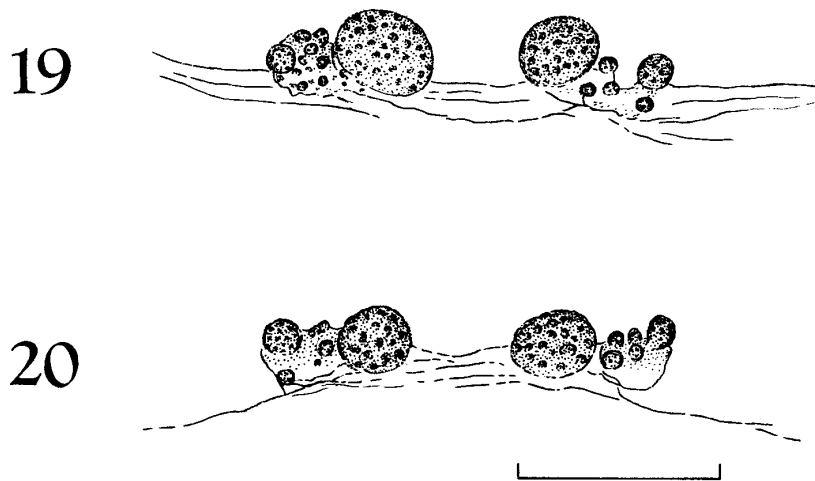
***Heptathela yaginumai* sp. nov.**

(Figs. 19-20)

Diagnosis. The structure of the female genitalia of this new species resembles that of *Heptathela higoensis* HAUPT, 1983, described from Kumamoto-shi, but differs from the latter by the shape of the main bursa (cf. Figs. 9-10 and 19-20). The outer cluster of the spermatheca is not developed in this new species.

Type series. Holotype: ♀, Honjô, Kunitomi-chô, Higashimorokata-gun, Miyazaki Pref., Kyushu, Japan, 18-VI-1949, T. YAGINUMA leg. (NSMT-Ar 108).

Description based on the female holotype (male unknown). **Measurement.** Body length 8.4 mm; prosoma length 4.1 mm, width 3.3 mm; opisthosoma length 4.3 mm, width 3.7 mm; lengths of palp and legs [total length (femur + patella + tibia + metatarsus + tarsus)]: palp 7.7 mm (2.7 + 1.4 + 1.6 + — + 2.0), leg I 8.5 mm (2.8 + 1.6 + 1.5 + 1.6 + 1.0), II 8.3 mm (2.6 + 1.6 + 1.4 + 1.7 + 1.0), III 9.2



Figs. 19-20. *Heptathela yaginumai* sp. nov., ♀ holotype from Miyazaki-shi. — 19, female genitalia, dorsal view; 20, same, ventral view. [Scale: 0.2 mm.]

mm (2.6+1.6+1.6+2.2+1.2), IV 12.9 mm (3.8+1.8+2.2+3.3+1.8).

Prosoma longer than wide, head high; ocular tubercle wider than long, ALE>PLE>PME>AME (nearly 15 : 13 : 8 : 2), AME very small, clypeus wider than ALE-ALE, median ocular area trapezoidal, wider than long. Chelicera with 13 teeth and one denticle on promargin of fang furrow. Leg formula IV, III, I, II; superior claws of tarsi each with 2 teeth; claw of palp with a tooth.

Opisthosoma ovate, longer than wide; posterior median spinnerets reduced, completely fused and with 5 setae on the margin.

Female genitalia (Fig.19-20). A pair of spermathecae present; spermatheca very short, divided into two parts: inner bursa with a large, granulate tubercle, outer cluster with several small tubercles.

Coloration and markings. Prosoma yellowish brown, ocular tubercle black; chelicera yellowish brown, ventrally reddish brown, sternum, legs and palps light yellowish brown. Opisthosoma light yellowish brown, dorsal sclerites darker, ventral sclerites light beige, spinnerets light yellowish white.

Distribution. Kyushu (known only from the type locality).

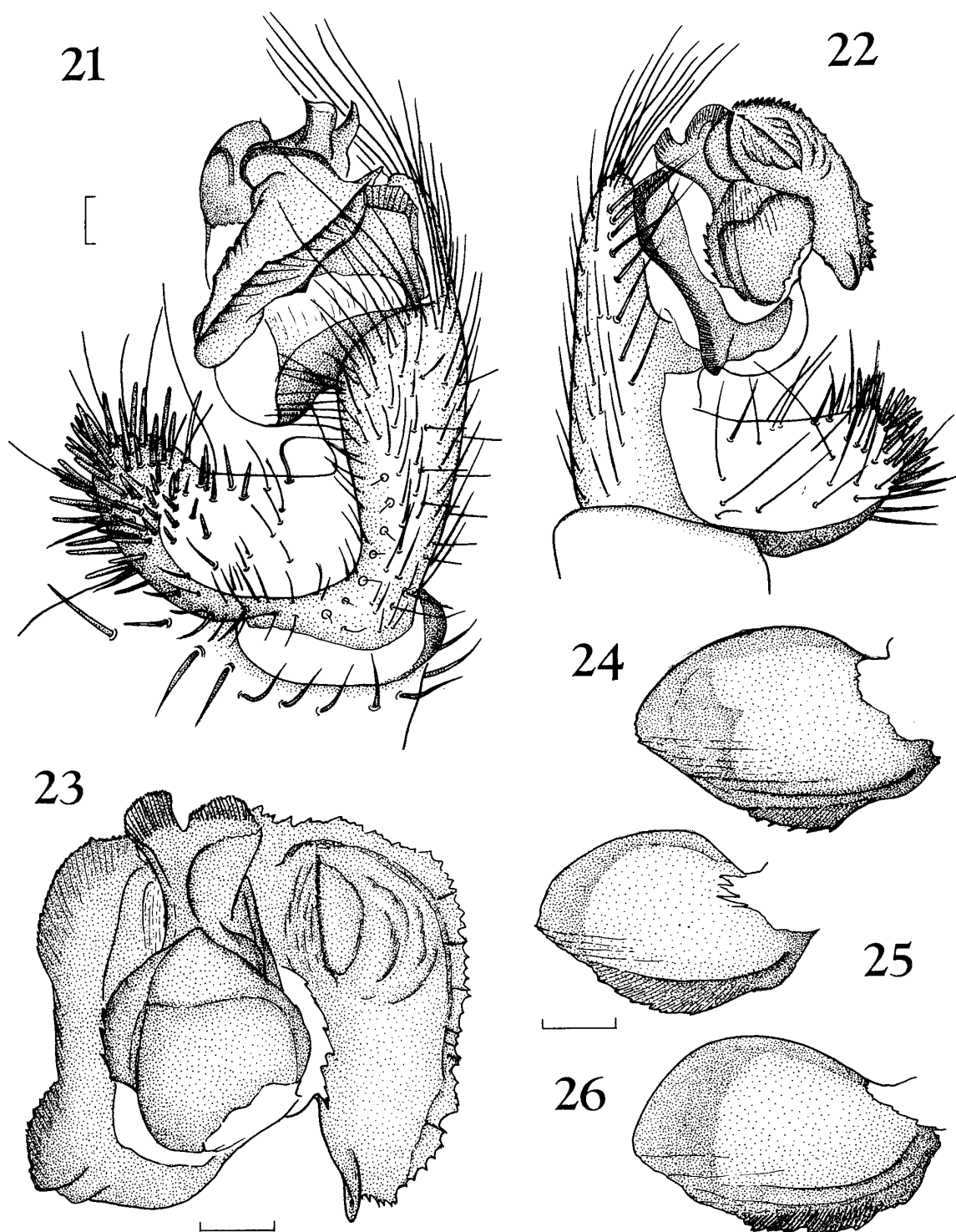
Remark. The species is dedicated to the late Dr. Takeo YAGINUMA, Osaka.

Heptathela sp.

(Figs. 21-26)

Specimens examined. 2 ♂, Yamada-chô, Kitamorokata-gun, Miyazaki Pref., Kyushu, Japan, 1 ♂, Tano, Yoshinomoto-chô, Miyakonojô-shi, Miyazaki Pref., 3 ♂, Arakawauchi, Yoshinomoto-chô, Miyakonojô-shi, Miyazaki Pref., all collected with bait traps, 9-X-1993, Y. NISHIKAWA Coll. (NSMT-Ar 3537-3539, 3550-3552).

Remarks. The male palp of this spider resembles those of *Heptathela kimurai* and *H. yakushimaensis* sp. nov., in shape but is distinguished from the latter by the details of the embolus and the contrategulum. Because the males of *Heptathela yaginumai* and *H. nishikawai* spp. nov. were not available for this study, the specimens recorded above are left undetermined.



Figs. 21-26. *Heptathela* sp., ♂ specimens from the southern part of Miyazaki Prefecture. —21, Male palp, retrolateral view; 22, same, prolateral view; 23, bulb, distal view; 24-25, contrategula, prolateral view. [Scales: 0.2 mm; 21-24, ♂ from Kitamorokata-gun, 25, ♂ from Tano, Miyakonojō-shi, 26, ♂ from Arakawauchi, Miyakonojō-shi.]

***Heptathela yakushimaensis* sp. nov.**

(Figs. 27–32)

Diagnosis. This new species is closely related to *Heptathela kimurai* (KISHIDA, 1920) and *H. kikuyai* sp. nov., but is distinguished from the two species by the structure of the male palp and the female genitalia. The prolateral margin of the conductor of the male palp of this new species is strongly serrate (cf. Fig. 4, 14, 24–26 and 30, and fig. 13 c in HAUPT, 1983, p. 287). The spermathecae of female genitalia are not much developed and the main bursa is smaller than the outer cluster (cf. Figs. 15–16 and 31–32).

Type series. Holotype: ♀, Mt. Kunibaidake, Yakushima Island, Kagoshima Prefecture, Japan, 15–VII-1990, A. TANIKAWA leg. (NSMT-Ar 3517); paratypes: 1 ♂, Miyanoura, 100 m alt., Yakushima Island, by bait trapping, 17–X-1996, S. SAITO leg. (NSMT-Ar 3519), 2 juv. ♀ 2 juv. ♂, same data as for the holotype (NSMT-Ar 3518).

Description. Measurement based on ♀ holotype and 1 ♂ paratype. Body length ♀ 10.0 mm, ♂ 10.1 mm; prosoma length ♀ 4.8 mm, ♂ 4.7 mm, width ♀ 4.1 mm, ♂ 4.0 mm; opisthosoma length ♀ 5.3 mm, ♂ 5.0 mm, width ♀ 4.1 mm, ♂ 3.1 mm; lengths of palps and legs [total length (femur + patella + tibia + metatarsus + tarsus)]: ♀, palp 9.2 mm (3.3 + 1.6 + 1.9 + — + 2.4), leg I 10.3 mm (3.3 + 1.9 + 2.0 + 2.0 + 1.1), II 9.9 mm (3.2 + 1.7 + 1.9 + 2.0 + 1.1), III 11.0 mm (3.1 + 1.8 + 1.9 + 2.6 + 1.6), IV 16.3 mm (4.8 + 2.3 + 3.0 + 4.1 + 2.1), ♂ palp 9.4 mm (2.9 + 1.4 + 2.9 + — + 2.2), leg I 15.1 mm (4.2 + 2.0 + 3.0 + 3.9 + 2.0), II 15.4 mm (4.0 + 2.0 + 2.8 + 4.4 + 2.2), III 16.5 mm (3.9 + 2.1 + 3.1 + 4.7 + 2.7), IV 21.6 mm (5.6 + 2.2 + 4.1 + 6.6 + 3.1).

Prosoma longer than wide, head high; ocular tubercle wider than long, ALE > PLE > PME > AME (♀ nearly 19 : 14 : 9 : 2, ♂ 16 : 13 : 8 : 2), AME very small, clypeus wider than ALE–ALE, median ocular area trapezoidal, wider than long. Chelicera with 12 teeth on promargin of fang furrow in female, with 10 vestigial teeth in male. Leg formula IV, III, II, I or IV, III, I, II; legs of males much longer than those of females; superior claws of tarsi each with 2 teeth in female, with 4–7 teeth in male, claw of female palp with one tooth.

Male palp (Figs. 27–30). Tibia without apophysis. Bulb (Figs. 27–28) seemingly larger than those of *Heptathela kimurai*; embolus of wide lamella, with two peaks, distal sclerites in three parts: tegulum with serrate margin, contrategulum with wide lamellar margin poorly serrate (Fig. 29), conductor roundish and rugate, widest at the middle, prolateral margin strongly serrate (Fig. 30).

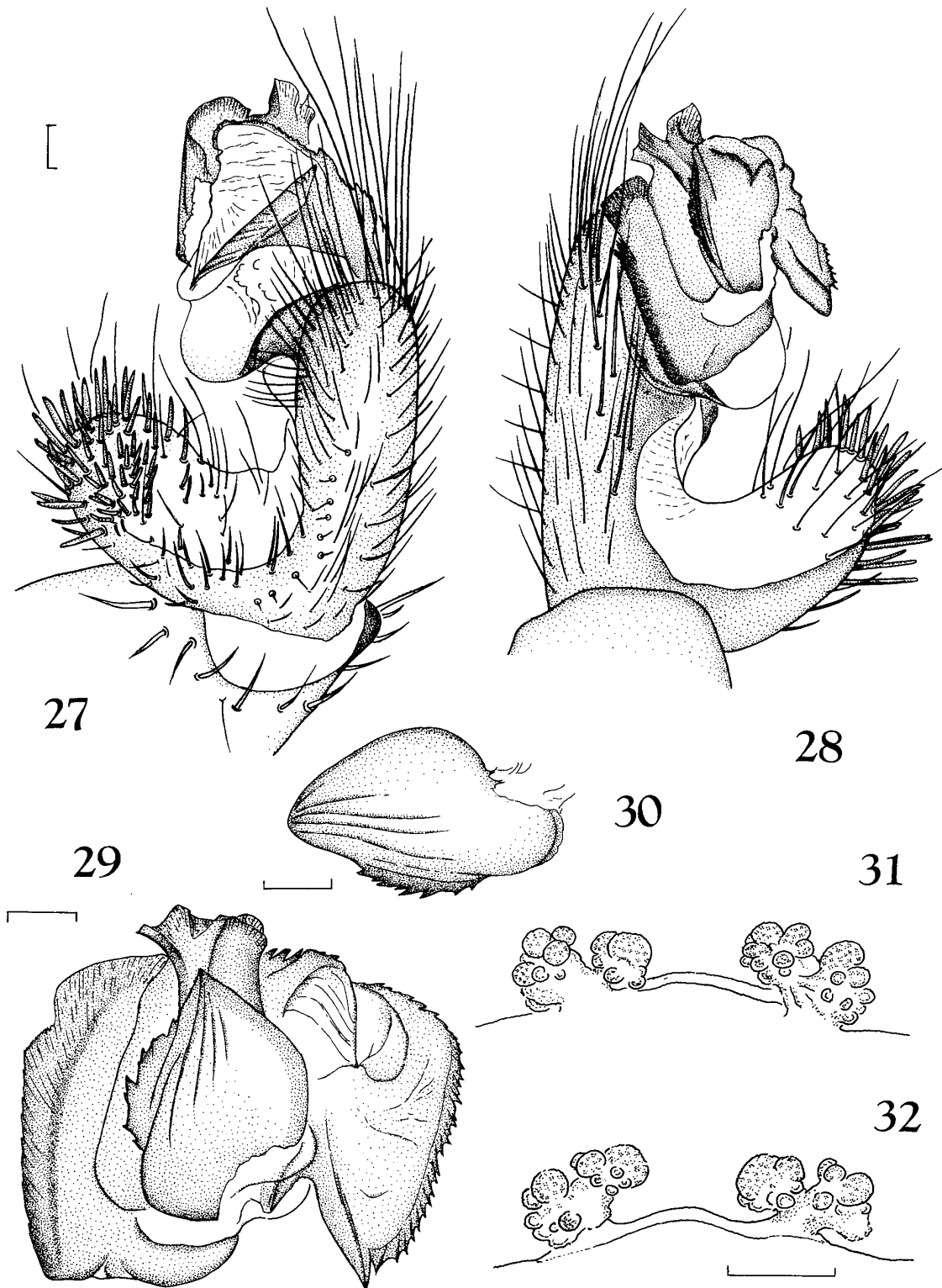
Opisthosoma ovate, longer than wide; posterior median spinnerets reduced and fused at the basal part but with two peaks, each with a seta.

Female genitalia (Figs. 31–32). Spermatheca very small, divided into two clusters, which are almost equal in size, with several granules.

Coloration and markings. ♀ Prosoma yellowish brown, ocular tubercle black; chelicera dorsally yellowish brown, ventrally reddish brown, sternum, legs and palps light yellowish brown. Opisthosoma beige, dorsal sclerites beige with two pairs of darker stripes; ventral sclerites light yellowish brown, genital part darker, spinnerets whitish yellow. ♂ Wholly discoloured under the influence of liquid used for trapping.

Distribution. Yakushima Island.

Remark. The specific epithet is derived from the name of the type area.



Figs. 27-32. *Heptathela yakushimaensis* sp. nov., ♀ holotype and 1 ♂ paratype from Yakushima Island. — 27, Male palp, retrolateral view; 28, same, prolateral view; 29, bulb, distal view; 30, contrategulum, prolateral view; 31, female genitalia, dorsal view; 32, same, ventral view. [Scales: 0.2 mm.]

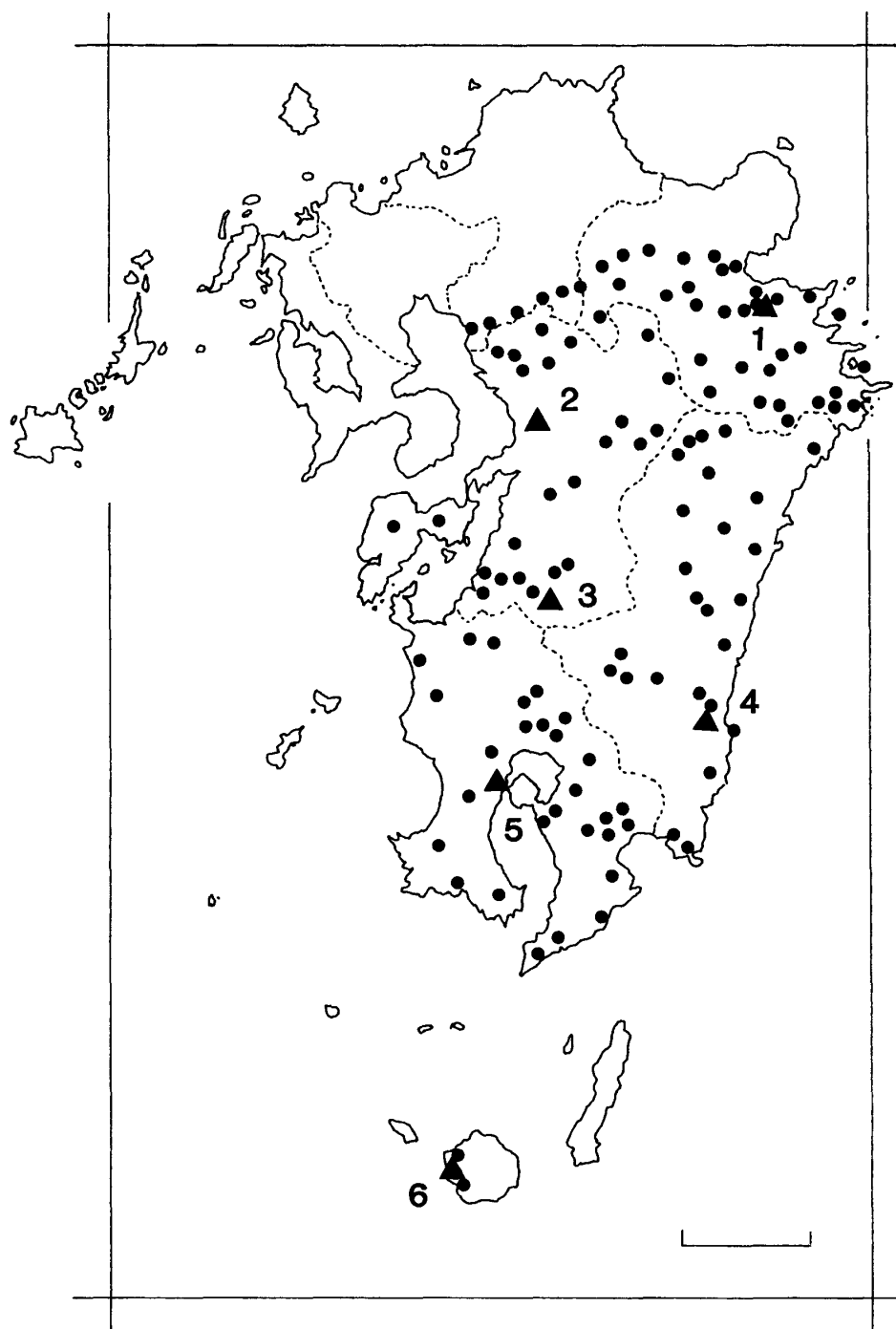


Fig. 33. Distribution of the species of the genus *Heptathela* in Kyushu. Circles: records of *Heptathela* species presented by KIKUYA (1996); triangles: type localities of the species reported in the present paper: 1, *Heptathela kikuyai* ONO, sp. nov. (Ôita-shi, Ôita Pref.), 2, *H. higoensis* HAUPT, 1983 (Kumamoto-shi, Kumamoto Pref.), 3, *H. nishikawai* ONO, sp. nov. (Hitoyoshi-shi, Kumamoto Pref.), 4, *H. yaginumai* ONO, sp. nov. (Kunitomi-chô, Miyazaki Pref.), 5, *H. kimurai* (KISHIDA, 1920) (Kagoshima-shi, Kagoshima Pref.), 6, *H. yakushimaensis* ONO, sp. nov. (Mt. Kunibaidake, Yakushima Island, Kagoshima Pref.) [upper line of the frame, 34°N, bottom, 30°N, left, 129°E, right, 132°E; scale, 50 km.]

Acknowledgements

I wish to express my sincere thanks to Dr. Narayoshi KIKUYA, Ôita, Dr. Yoshiaki NISHIKAWA, Osaka, Mr. Shusei SAITO, Tokyo, and Mr. Akio TANIKAWA, Kanagawa, for offering invaluable specimens. Many thanks are also due to Dr. Shun-Ichi UENO and Dr. Mamoru OWADA, National Science Museum, Tokyo for reviewing the manuscript of this paper.

要 約

国立科学博物館が昭和42年度から実施している「日本列島の自然史科学的総合研究」の一環として、平成8年度に行われた中国地方西部および九州地方北部を中心とする地域の現地調査で得られた資料、および同博物館にこれまで蓄積されている所蔵標本を用いて、九州地方に生息するキムラグモ属（クモ目、ハラフシグモ科）のクモ類の分類学的研究を行った。

キムラグモ [*Heptathela kimurai* (KISHIDA, 1920)] は、大正9年に当時、鹿児島県の第七高等学校の学生だった木村有香（のちの東北大学教授、植物学者）が鹿児島市の城山で採集した標本をもとに、岸田久吉が命名記載したクモで、原始的な特徴を保持するハラフシグモ亜目に属する特異なクモである。そのため、人目をひいて、九州の北部から広く琉球列島に分布することが確かめられ、また菊屋奈良義（1993, 1996）や吉倉真（1954, 1955）らによって多くの有益な生態学的研究や発生学的研究がなされてきた。

それに比べて、分類学的な研究はまったく顧みられず、長いあいだ上記のただ1種が広範囲に分布すると考えられてきた。最近になってようやく HAUPT（1979, 1983, 1990）や筆者ら（ONO, 1996, 1997 b; ONO & NISHIKAWA, 1989）によって分類学的な検討が加えられ、奄美大島以南の同類は2属9種に整理されている（ONO, 1997 b）。九州では福岡県南部以南のほぼ全域にわたって本属のクモが生息しているため（Fig. 33）、島ごとにより明瞭な種分化がみられる琉球列島と違い、全体を見渡すことが困難であった。

HAUPT（1983）は、九州から沖縄本島北部にまで分布するキムラグモをひとつの種と考え、熊本市と沖縄本島および奄美大島のものの形態の特異性に注目して、それらとそれ以外の地域のものを一括して4亜種に分類した。しかし、菊屋（1996）が指摘しているように、本種の移動能力はきわめて低く、地域個体群間での交流は疎である。その結果、地理的変異が顕著で、広い九州では系統が複雑に入り組んでいることが予想される。その上、雄の標本が得にくいこともあって、十分な研究材料に恵まれない。そうした状況では亜種を用いた分類は尚早であろうと思われる。

今回、得られた標本をもとに、生殖器の細部の形質の比較検討を行ない、それに基づいて九州の同類をとりあえず、以下のように、既知の2種と4新種および雄のみの標本のため種名決定にいたらなかった1種の7種に分類した：*Heptathela kimurai* (KISHIDA, 1920) キムラグモ（狭義；亜種として扱う場合はサツマキムラグモと呼びたい）、*H. higoensis* HAUPT, 1983 ヒゴキムラグモ（種に昇格）、*H. kikuyai* ONO, 1997 プンゴキムラグモ（新称）、*H. nishikawai* ONO, 1997 ヒトヨシキムラグモ（新称）、*H. yaginumai* ONO, 1997 ヒュウガキムラグモ（新称）、*H. sp.* キムラグモ属の1種（宮崎県南部産）、*H. yakushimaensis* ONO, 1997 ヤクシマキムラグモ（新称）。

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